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PATENT  
(Docket No. IN-5530)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of  
Bernhard Lettmann

Serial No.: 10/018,336

Filed: October 30, 2001

For: AQUEOUS COATING MATERIAL  
AND MODULAR SYSTEM FOR  
PRODUCING SAME

Group Art Unit: 1711

Examiner: Umakant K. Rajguru

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Mary E. Golota

TRANSMITTAL OF APPEAL BRIEF

MSAF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed on March 18, 2005.

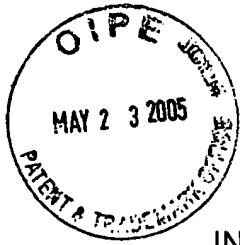
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Dated: May 18, 2005

Respectfully submitted,



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APPLICANT'S APPEAL BRIEF UNDER 37 C.F.R. §1.191

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### REAL PARTY IN INTEREST

The inventors of record in this application have assigned all right, title and interest in and to the invention(s) of this application to BASF COATINGS AKTIENGESELLSCHAFT. The recordation date of the assignment is 10/30/2001 and is recorded in Reel/Frame 012593/0562. Accordingly, BASF COATINGS AKTIENGESELLSCHAFT is the real party in interest.

### RELATED APPEALS AND INTERFERENCES

To the best of the undersigned's knowledge and belief, there are no related appeals or interferences.

### STATUS OF CLAIMS

Claims 1-11, 14, 15, 17-28, 33, 36 and 39 are pending in the application. Claims 12, 13 and 29-32 were withdrawn as being subject to a nonelected invention. Claims 34, 35, 37, 38, 40, and 41 have been canceled.

This appeal is taken from the final rejection of claims 1-11, 14, 15, 17-28, 33, 34, 36 and 39 made in the Office Action mailed on November 18, 2004.

Claims 1-11, 14, 15, 17-28, 33, and 36 are being appealed. Claim 39 is not being appealed.

### STATUS OF AMENDMENTS

Claims 14 and 33 were amended and claim 34 canceled in the After Final Response of February 18, 2005.

The Advisory Action of April 12, 2005 stated that the Amendments of February 18, 2005 would be entered for the purposes of appeal.

Accordingly, claims 14 and 33 are presented in the Claims Appendix as they appeared in the After Final Response of February 18, 2005. Claim 34 stands as canceled.



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provide any motivation to do what  
Applicant has done.**

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B2. Claims 4 -11, 14, 15, 17-28, 33 and 36 are  
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Reusmann et al., U.S. 6,403,701,  
in view of Kawakami et al., EP 081994 because  
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## SUMMARY OF THE CLAIMED SUBJECT MATTER

Claims 1, 2, and 3 are independent claims. Applicant's inventions of independent claims 1, 2, and 3 require the combination of an organic solvent based base color and/or effect component (see *Specification pages 14-72*), an aqueous base color component (see *Specification pages 72-76*), and an aqueous pigment-free mixing varnish component (see *Applicant's Specification pages 77-79*). Although the solvent based base color component may be either color and/or effect imparting, it is an aspect of Applicant's claimed inventions that the aqueous base color component be color-imparting. See *Specification pages 73-76*.

Independent claims 1, 2, and 3 are generally discussed in Applicant's Specification on pages 14-82 and respectively relate to an aqueous coating material, a module system (see *Specification pages 5-8*), and a process for preparing an aqueous coating material. The module system of claim is particularly discussed on pages 5-8 (see *Specification pages 82-89*).

Independent claim 1 discloses an aqueous coating material that comprises a product formed by mixing together at least one base color (A1), at least one color-imparting base color (A2), and at least one pigment free mixing varnish (B).

The base color (A1) contains less than 5% by weight water and imparts at least one of color and effect. See *Specification, page 14, lines 20-29 and page 15, lines 1-20*. Base color (A1) comprises at least one binder (a11), wherein the binder (a11) is optionally water-soluble or water-dispersible, at least one pigment (a12) that provides at least one of color and effect, and at least one organic solvent (a13), wherein the organic solvent is optionally water-miscible. See *Specification, page 15, line 28 through page 58, line 7, and page 70, line 10 through page 72, line 22*.

In addition, base color (A1) may also, optionally, comprise at least one of (a14) at least one crosslinking agent, (a15) at least one auxiliary, and (a16) at least one additive. See *Specification, page 58, line 9 through page 70, line 8*.

The at least one color-imparting base color (A2) is aqueous. See *Specification, page 73, line 10 through page 76*. Aqueous base color (A2) comprises at least one water-soluble or -dispersible binder (a21), at least one color pigment (a22), and water (a23). See *Specification, page 75, line 8 through page 76, line 10*. In addition, aqueous base color (A2) may also, optionally, comprise at least one of (a24) at least one organic solvent, wherein the organic solvent is optionally water-miscible, (a25) at least one crosslinking agent, (a26) at least one auxiliary, and (a27) at least one additive. See *Specification, page 73, line 10 through page 76*.

The pigment-free varnish (B) is aqueous. See *Specification, page 77, line 1 through page 79*. Pigment-free varnish (B) comprises at least one water-soluble or -dispersible binder (b1) and water (b2). See *Specification, page 79, lines 6-14*. In addition, pigment-free varnish (B) may also, optionally, comprise at least one of: (b3) at least one crosslinking agent, (b4) at least one auxiliary, and (b5) at least one additive. See *Specification, page 77, line 1 through page 79*.

Finally, the aqueous coating material of claim 1 may also optionally contain a pigment-free aqueous medium (C) that comprises (c1) at least one rheology control additive. See *Specification, page 80, line 1 through page 82, line 9*.

It is also an optional proviso of claim 1 that at least one of the additives (a16), (a27), and (b5) further comprise at least one rheology control additive (c1). See *Specification, page 81, lines 11-18*.

Independent claim 2 discloses a modular system for preparing aqueous coating materials. The claimed modular system comprises a module (I), a module (II), and a varnish module (III), and optionally a rheology module (IV). See *Specification pages 11, line 19 through page 14, line 14*.

Module (I) contains less than 5% by weight water and provides at least one of color and effect. See *Specification, page 14, line 16 through page 15, line 7*. Module (I) comprises at least one base color (A1) that imparts at least one of color and effect. Base color (A1) is as described above with respect to

claim 1. See *Specification, page 15, line 28 through page 58, line 7, and page 70, line 10 through 72, line 22.*

Module (II) is aqueous and imparts color. The at least one color-imparting aqueous module (II) comprises at least one aqueous color-imparting base color (A2). See *Specification, page 73, lines 10-11.* Aqueous base color (A2) is as described above with regards to claim 1. See *Specification, page 73, line 10 through page 76.*

Module (III) is an aqueous, pigment-free component. It comprises at least one pigment-free aqueous mixing varnish (B). See *Specification, page 77, lines 1-3.* Pigment-free mixing varnish (B) is as described above with regards to claim 1. See *Specification, page 77, line 1 through page 79.*

Finally, the modular system of claim 2 may also optionally contain a module (IV) that is pigment free. If module (IV) is present, it contains pigment-free aqueous medium (C) that comprises (c1) at least one rheology control additive. Aqueous medium (C) is as described above with regards to claim 1. See *Specification, page 80, line 1 through page 82, line 9.*

It is also an optional proviso of claim 2 that at least one of the additives (a16), (a27), and (b5) further comprise at least one rheology control additive (c1). See *Specification, page 81, lines 11-18.*

Independent claim 3 provides a process for preparing an aqueous coating material with precisely defined shade and optical effect. The desired coating material is obtained by mixing certain specified modules together shortly before application of the prepared coating material. The modules to be mixed together differ in material composition and function and are stored separately from one another. See *Specification page 82, line 11 through page 89.*

The disclosed process of claim 3 requires mixing together a module (I), a module (II), and a varnish module (III), and optionally a rheology module (IV). Modules (I), (II), (III), and (IV) are as described above in regards to claim 2.

Claims 4, 6, 7, 9, 10, 11, 14 and 15 are dependent upon independent claim 1.

Dependent claim 4 provides the aqueous coating material of claim 1 wherein base color (A1) imparts one of I) effect or ii) color and effect. See *page 15, lines 1-7.*

Dependent claim 6 provides the aqueous coating material of claim 1 wherein additive (b5) comprises at least one rheology additive. See *Specification, page 80, line 1 through page 82, line 9*

Dependent claim 7 provides the aqueous coating material of claim 1 wherein aqueous medium (C) is present and contains the only rheology control additive (c1). See *Specification, page 80, line 1 through page 82, line 9*

Dependent claim 9 provides the aqueous coating material of claim 1 wherein binders (a11), (a21), and (b1) come from the same polymer class. See *Specification, page 77, lines 12-16.*

Dependent claim 10 provides the aqueous coating material of claim 9 wherein binders (a11), (a21), and (b1) are polyurethane resins. See *Specification, page 73, lines 15-22, and page 77, lines 12-16.*

Dependent claim 11 provides the aqueous coating material of claim 1 wherein binders (a21) and (b1), and optionally the binder (a11), comprise functional groups that can be converted into anions by at least one of neutralizing agents and anionic groups. See *Specification, page 17, line 26 through page 21, line 15 and page 77, line 11-16.*

Claim 14 is a use claim incorporating the limitations of the coating material of claim 1. Claim 14 provides a coating prepared by a process comprising first applying the aqueous coating material of claim 1 to a substrate to provide an applied coating material and then curing the applied coating material to provide a coating. See *Specification, page 82, line 11 through page 89.*

Claim 15 is dependent upon claim 14. It provides the coating of claim 14 wherein said coating comprises a multicoat coating system, wherein the multicoat coating system is formed by a wet-on-wet technique, and wherein the multicoat coating system is at least one of a color coating system and an effect coating system. See *Specification, page 82, line 11 through page 89.*

Claims 5, 8, 17, 20, 23, 24, 27, 33, and 36 are dependent upon independent claim 2.

Claim 5 provides that the modular system of claim 2 may be one of three alternatives. The three stated alternatives of claim 5 relate to whether module (I) imparts one of color or effect, or both. *See page 15, lines 1-7.*

Claim 8 provides the module system of claim 2 that further comprises the rheology module (IV). *See Specification, page 80, line 1 through page 82, line 9*

Claim 17 provides the module system of claim 2 wherein base color (A1) imparts one of effect or color and effect. *See page 15, lines 1-7.*

Claim 20 provides the module system of claim 2 wherein additive (b5) comprises the at least one rheology control additive. *See Specification, page 80, line 1 through page 82, line 9.*

Dependent claim 23 provides the modular system of claim 2 wherein binders (a11), (a21), and (b1) come from the same polymer class. *See Specification, page 77, lines 12-16.*

Claim 24 provides the module system of claim 23 wherein binders (a11), (a21), and (b1) are polyurethane resins. *See Specification, page 73, lines 15-22, and page 77, lines 12-16.*

Dependent claim 27 provides the aqueous coating material of claim 2 wherein binders (a21) and (b1), and optionally the binder (a11), comprise functional groups that can be converted into anions by at least one of neutralizing agents and anionic groups. *See Specification, page 17, line 26 through page 21, line 15 and page 77, line 11-16.*

Dependent claims 33 and 36 are analogous to claims 14 and 15 and relate to a coating prepared by the application of the modular system of claim 2 to a substrate. *See Specification, page 82, line 11 through page 89.*

Claims 18, 19, 21, 22, 25, 26, and 28 depend upon independent claim 3.

Claim 18 provides the process of claim 3 wherein base color (A1) imparts one of effect or color and effect. *See page 15, lines 1-7.*

Claim 19 provides that the modular system of claim 3 may be one of three alternatives. The three stated alternatives of claim 19 relate to whether module (I) imparts one of color or effect, or both. *See page 15, lines 1-7.*

Claim 21 provides the process of claim 3 wherein additive (b5) comprises the at least one rheology control additive. *See Specification, page 80, line 1 through page 82, line 9.*

Claim 22 provides the process of claim 3 wherein the aqueous coating material further comprises the rheology module (IV). *See Specification, page 80, line 1 through page 82, line 9.*

Dependent claim 25 provides the process of claim 3 wherein binders (a11), (a21), and (b1) come from the same polymer class. *See Specification, page 73, lines 15-22, and page 77, lines 12-16.*

Dependent claim 26 provides the process of claim 25 wherein binders (a11), (a21), and (b1) are polyurethane resins. *See Specification, page 73, lines 15-22, and page 77, lines 12-16.*

Dependent claim 28 provides the process of claim 3 wherein binders (a21) and (b1), and optionally the binder (a11), comprise functional groups that can be converted into anions by at least one of neutralizing agents and anionic groups. *See Specification, page 17, line 26 through page 21, line 15 and page 77, line 11-16.*

GROUNDS OF REJECTION  
TO BE REVIEWED ON APPEAL

- I. Claim 14 stands rejected as indefinite under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph for failing to precisely point out the scope of the claim.
- II. Claims 1-11, 14, 15, 17-28, 33 and 36 stand rejected under 35 U.S.C. §103(a) as being obvious over Reusmann et al., U.S. 6,403,701, hereafter “Reusmann” or “701” in view of Kawakami et al., EP 081994, hereafter “Kawakami” or “994”.

## ARGUMENT

### A. CLAIM 14 IS DEFINITE UNDER 35 U.S.C. § 112, 2<sup>ND</sup> PARAGRAPH.

The PTO has maintained the rejection of dependent claim 14. The basis of the rejection appears to be that

...[i]t is still not clear what is precisely encompassed by the scope of this claim. (Examiner finds that this claim encompass "a coating" or "a coating material" and fails to further limit the scope of claim 1 from which it depends).

*(Office Action of 11/18/04, page 2)*

Applicant appreciates the PTO's comments but respectfully submits that amended claim 14 satisfies the requirements of the second paragraph of 35 U.S.C. § 112.

The first sentence of the second paragraph of Section 112 is a requirement for precision and definiteness of claim language. If the scope of subject matter embraced by a claim is clear and if the applicant has not otherwise indicated that he intends the claim to be of a different scope, then the claim particularly points out and distinctly claims the subject matter that the applicant regards as his invention. *In re Borkowski et al.*, 164 U.S.P.Q. 642, (C.C.P.A. 1970).

Definiteness of claim language must be analyzed, not in a vacuum, but in light of (1) the content of the particular application disclosure, (2) the teachings of the prior art, and (3) the claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. See, e.g., *In re Marosi*, 710 F.2d 799, 218 U.S.P.Q. 289 (Fed. Cir. 1983); *Rosemount, Inc. v. Beckman Instruments, Inc.*, 727 F.2d 1540, 221 U.S.P.Q. 1 (Fed. Cir. 1984); *W.L. Gore & Assocs., Inc., v. Garlock, Inc.*, 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983).

Thus, it is respectfully noted that the applicable standard requires reliance on the instant application rather than a particular Examiner's individual knowledge or opinion. More particularly, it is noted that the disclosures of the

instant application satisfy the relevant standard for claim definiteness under 35 U.S.C. 112, 2<sup>nd</sup> paragraph.

Claim 14 provides a coating produced by the application and curing of the aqueous coating material of independent claim 1. The amended language of claim 14 is based on the subject matter of pages 82-89 of the Specification. This portion of the Specification specifically refers to the application and curing of the disclosed aqueous coating materials of independent claim 1.

Thus, those of skill in the art reading the Specification will understand the scope of pending claim 14.

For example, the Specification describes the application of the aqueous coating materials of claim 1 to a substrate on page 85, lines 1-17.

Curing of the resulting applied coating materials is described on page 84, lines 20-28, page 85, lines 19-24, and on page 88, line 24 through page 89.

Those of skill in the art will understand that 'coating' as used in claim 14 refers to cured films resulting from the application and curing of the aqueous coating materials of claim 1, especially in view of the discussion of dry film thicknesses on page 89 of the Specification.

Accordingly, it is respectfully submitted that claim 14 is valid under Sec. 112, second paragraph, because "... those skilled in the art would understand what is claimed." *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1217, 18 U.S.P.Q. 2d 1016, 1030 (Fed Cir.), cert denied, 502 U.S. 856 (1991)

Reconsideration and removal of the rejection as to claim 14 is respectfully requested.

B. CLAIMS 1-11, 14, 15, 17-28, 33 AND 36 ARE NONOBVIOUS UNDER 35 U.S.C. §103(A) OVER REUSMANN ET AL., U.S. 6,403,701," IN VIEW OF KAWAKAMI ET AL., EP 081994.

B1. Claims 1, 2, and 3 are nonobvious under 35 U.S.C. §103(a) over Reusmann et al., U.S. 6,403,701, in view of Kawakami et al., EP 081994 because the cited combination fails to (i) disclose all of the required elements and (ii) provide motivation to do what Applicant has done.

The PTO has maintained the rejection of independent claims 1, 2, and 3. It is the PTO's position that it would have been obvious to include the paper coating composition of the '994 application in the system of the '701 patent. Motivation for such a combination is said to be disclosed in the last paragraph of the Abstract of the '994 application, i.e., '...to make a coated paper which has good water resistance (due to the resin (Y)) whilst being receptive to rotary offset printing ink.' See *Office Action of November 5, 2003*.

Applicant greatly appreciates the detailed basis of rejection but must respectfully disagree.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP 2143.

This standard is not met with the instant combination of references.

Reusmann is relied upon for its description of a mixer system, which includes (A) many water-free base colors and (B) a pigment-free aqueous component. See '701, *Abstract*. Component (A) contains less than 5% by wt of water, one coloring and/or special effect pigment, an organic solvent, a water thinnable or water-dispersible first binder and if desired auxiliaries and additives. See '701, *column 3, line 3 to column 5, line 47*. Component (B) comprises

aqueous dispersion of polyurethane resin. See '701, column 5, line 48 to column 11, line 62.

It is the PTO's position that components A and B of Reusmann read respectively on base color (A1) and mixing varnish (B) of Applicant's instant claims 1, 2, and 3.

The PTO recognizes that the '701 patent does not disclose or suggest a composition comprising the combination of Applicant's components (A1) and (B) with a component (A2) that requires binder, pigment and water.

The PTO relies upon Kawakami to rectify this deficiency of the '701 patent. Per it's Abstract, the '994 application describes paper coating compositions that require a particular thermosetting resin, conventional pigment, binder and water.

As noted previously, it is the PTO's position that it would have been obvious to include the paper coating composition of the '994 application in the system of the '701 patent. Motivation for such a combination is said to be disclosed in the last paragraph of the Abstract of the '994 application, i.e., '...to make a coated paper which has good water resistance (due to the resin (Y)) whilst being receptive to rotary offset printing ink.'

Applicant greatly appreciates the detailed basis of rejection but must respectfully disagree.

Applicant's inventions of independent claims 1, 2, and 3 require the combination of an organic solvent based base color (A1), an aqueous base color (A2), and an aqueous pigment-free mixing varnish (B). Although the solvent based base color (A1) may be either color and/or effect imparting, it is an aspect of Applicant's claimed inventions that the aqueous base color (A2) be color-imparting. See *Specification pages 73-76.*

The cited combination of the compositions of the '701 patent and the '994 application fail to disclose Applicant's claimed combination for two reason. First, the cited combination fails to disclose all of the required elements of Applicant's independent claims 1, 2, and 3. Second, the cited combination fails to provide any suggestion or motivation to do what Applicant has done.

**B1a. Claims 1, 2, and 3 are nonobvious over Reusmann et al., U.S. 6,403,701,” in view of Kawakami et al., EP 081994 because the cited combination fails to (i) disclose all of the required elements of claim 1, 2, or 3.**

For example, the '994 application is concerned solely with paper coating compositions that provide increased water resistance to the coated paper.

A review of the teachings of the '994 application indicate that the disclosed coatings therein are not intended to be color imparting. Rather, the pigments disclosed on page 8, lines 22-27 of the '994 application are filler pigments intended to function as water imparting agents. See '994, *page 8, lines 10-27.*

Applicant notes that titanium dioxide is listed as a filler pigment in the '994 reference. However, the disclosure of titanium dioxide is not suggestive of color pigments in as much as those of skill in the art appreciate that titanium dioxide may be used as either a filler pigment or a color imparting pigment. The recitation of titanium dioxide in a laundry list of filler pigments does not disclose or suggest Applicant's required element of at least one color pigment (a22).

For example, Applicant's definition of "at least one color pigment (a22)" is generally set forth on page 54, lines 5-29, page 55, lines 1-3, and page 73, lines 24-27 of Applicant's Specification. It is noted that only those sections of page 54 and 55 relating to color pigments are relevant to the definition of the at least one color pigment (a22). That is, effect pigments are not encompassed within the scope of the at least one color pigment (a22).

Moreover, Applicant's Specification makes a distinction between pigments and fillers. If fillers were interchangeable with pigments, they would have been included in Applicant's definition of pigments. See *Specification, page 55, line 5-14.* Instead, this portion of Applicant's Specification provides two different terms to indicate that color pigments and fillers are not equivalent and interchangeable. Rather, lines 6-9 teach that fillers may only be used as substitutions for effect pigments (a12) when the fillers provide appropriate hiding power. As indicated

on page 73, lines 24-27, Applicant's component (A2) must comprise at least one color pigment. Filler pigments do not satisfy the definition of color pigments.

Thus, the compositions taught by the '994 application on page 22, lines 13-26 fail to disclose or suggest Applicant's aqueous color-imparting base color (A2). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 USPQ 580 (C.C.P.A. 1974); MPEP 1243.03.

The combination of Examples 3-16 of the '994 reference with the components of the '701 patent fail to provide the unique combinations required by Applicant's claims 1, 2, and 3. In particular, there is no color-imparting aqueous base color in such combinations as is required by Applicant's claimed inventions.

Accordingly, the cited combination fails to provide a *prima facie* case of obviousness as to the inventions of independent claims 1, 2, and 3. In particular, the cited combination fails to provide all of the required limitations of the inventions of independent claims 1, 2, or 3.

Reconsideration and removal of the rejection is thus respectfully requested with respect to Applicant's independent claims 1, 2, and 3 in view of the failure of the cited combination to disclose all of the required limitations of these claimed inventions.

**B1b. Claims 1, 2, and 3 are nonobvious over Reusmann et al., U.S. 6,403,701," in view of Kawakami et al., EP 081994 because the cited combination fails to (ii) provide any motivation to do what Applicant has done.**

In addition, Applicant must respectfully disagree with the PTO's contention that the cited combination provides requisite motivation and submits that the cited combination fails to provide any suggestion to do what Applicant has done.

In particular, there is no motivation in the '994 application to combine its complete and 'stand alone' paper coatings of Examples 3-16 with the components of the '701 patent.

Rather, the teachings of the '994 application indicate that the disclosed paper coatings containing filler pigments are complete and do not require admixture with any other components.

This is evidenced by the fact that the '994 application teaches that the total solids concentrations of the disclosed paper coating compositions should be from 30 to 80 weight %, preferably from 50 to 60 weight % and that such complete paper coating compositions provide adequate water resistance to paper substrates. *See page 9, lines 3-7 and pages 10-35, especially Examples 3-16.* It is noted that Part (1) of Examples 13-16 indicates that the prepared test coatings are complete paper coatings since they were adjusted to provide a final solids concentration of 55 wt%.

In fact, Applicant respectfully submits that the portion of the '994 Abstract relied upon by the PTO actually teaches away from Applicant's claimed invention and thus cannot provide motivation to do what Applicant has done.

A reference that leads one of ordinary skill in the art away from the claimed invention cannot render it unpatentably obvious. *Dow Chem. Co. v. American Cyanamid Co.* 2 U.S.P.Q.2d 1350 (Fed. Cir. 1987).

For example, the Federal Circuit has clearly stated that "each prior art reference must be evaluated as an entirety, and ...all of the prior art must be evaluated as a whole". *In re Fritch*, 23 U.S.P.Q.2d 1780, 1782 (Fed. Cir. 1992). And particularly on point, the CCPA had earlier said "[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art." *In re Keller*, 108 U.S.P.Q. 871, 881 (C.C.P.A. 1981).

One of skill in the art reading the entire '994 application, but especially Examples 3-16, would find that the disclosed paper coatings were not suitable for admixture with any other coating components. That is, the disclosed coatings are taught to provide acceptable water resistance simply by their sole application to a paper substrate. *See '994, last paragraph of Abstract.* This

interpretation of the '994 application is supported by the working examples of the '994 application which clearly establish that desirable water resistance of paper substrates is obtained solely with the use of the disclosed paper coating compositions.

Moreover, it is respectfully submitted that the '994 application's teachings with respect to improved water resistance are confined to the advantages resulting from the use of the particularly disclosed thermosetting resin. This thermosetting resin results from the reaction of (a), (b), and a resin (Y) obtained by reacting (i), (ii), and (iii).

Nothing in the '994 application provides a reason to combine a solvent borne base color (A1) with a pigment free mixing varnish (B) and an aqueous color-imparting base color (A2). The PTO is encouraged to provide a citation to any such suggestion.

Instead, it is submitted that the motivation suggested by the PTO is apparent only with the benefit of the hindsight teachings of Applicant's Specification. A statement that modifications of the prior art to meet the claimed inventions would have "*well within the ordinary skill of the art* at the time the claimed invention was made" because the references teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993); MPEP 2143.01.

Nothing in the '994 application suggests that the disclosed paper coating compositions should be combined with a solvent based composition (A2) and an aqueous pigment free varnish (B). Rather, the teachings of the '994 application indicate that the disclosed compositions are intended to be wholly complete coatings in and of themselves. Nothing except Applicant's teachings suggest that they should be combined with components such as Applicant's (A1) and (B). The mere fact that references can be combined does not render the resultant combination obvious unless the *prior art* suggests the desirability of the

combination. *In re Fritch*, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992), emphasis added.

Accordingly, the cited combination fails to provide a *prima facie* case of obviousness as to the inventions of independent claims 1, 2, and 3. In particular, the cited combination fails to provide any motivation to do what Applicant has done in the inventions of independent claims 1, 2, or 3.

Reconsideration and removal of the rejection is thus respectfully requested with respect to Applicant's independent claims 1, 2, and 3 in view of the failure of the cited combination to disclose the motivation necessary for a *prima facie* case of obviousness under 35 U.S.C. §103(a).

B2. Claims 4 -11, 14, 15, 17-28, 33 and 36 are nonobvious under 35 u.s.c. §103(a) over Reusmann et al., U.S. 6,403,701," in view of Kawakami et al., EP 081994 because they incorporate the limitations of at least one independent claim.

Reconsideration and removal of the rejection as to dependent claims 4-11, 14, 15, 17-28, 33 and 36 is also requested, in as much as each one of these dependent claims incorporate the limitations of either independent claim 1, 2, or 3. Claims 1, 2, and 3 are believed to nonobvious in view of the foregoing arguments set forth in Section B1 above, hereby incorporated by reference.

FOR THESE REASONS, Applicant respectfully petitions this Honorable Board to reverse the rejection set forth by the Examiner.

Respectfully submitted,

  
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Wednesday, May 18, 2005

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## Appendix -- Copy of the Claims Under Appeal

1. (Previously Presented) An aqueous coating material comprising a product formed by mixing with one another
  - (A1) at least one base color containing less than 5% by weight water that imparts at least one of color and effect comprising
    - (a11) at least one binder, wherein the binder is optionally water-soluble or water-dispersible,
    - (a12) at least one pigment that provides at least one of color and effect, and
    - (a13) at least one organic solvent, wherein the organic solvent is optionally water-miscible,  
and optionally, at least one of
      - (a14) at least one crosslinking agent,
      - (a15) at least one auxiliary, and
      - (a16) at least one additive;
  - (A2) at least one aqueous color-imparting base color comprising
    - (a21) at least one water-soluble or -dispersible binder,
    - (a22) at least one color pigment, and
    - (a23) water,  
and optionally, at least one of
      - (a24) at least one organic solvent, wherein the organic solvent is optionally water-miscible,
      - (a25) at least one crosslinking agent,
      - (a26) at least one auxiliary, and
      - (a27) at least one additive;

and

- (B) at least one aqueous, pigment-free mixing varnish comprising
  - (b1) at least one water-soluble or -dispersible binder, and
  - (b2) water,  
and optionally, at least one of

- (b3) at least one crosslinking agent,
- (b4) at least one auxiliary, and
- (b5) at least one additive;  
and optionally
- (C) a pigment-free aqueous medium comprising
  - (c1) at least one rheology control additive;optionally, with the proviso that at least one of the additives (a16), (a27), and (b5) further comprise at least one rheology control additive (c1).

2. (Previously Presented) A modular system for preparing aqueous coating materials comprising

- (I) at least one module containing less than 5% by weight water that provides at least one of color and effect comprising
  - (A1) at least one base color that imparts at least one of color and effect comprising
    - (a11) at least one binder, wherein the binder is optionally water-soluble or water-dispersible,
    - (a12) at least one pigment that imparts at least one of color and effect, and
    - (a13) at least one organic solvent, wherein the organic solvent is optionally water-miscible,  
and optionally, at least one of
      - (a14) at least one crosslinking agent,
      - (a15) at least one auxiliary, and
      - (a16) at least one additive;
- (II) at least one aqueous color module comprising
  - (A2) at least one aqueous color-imparting base color comprising
    - (a21) at least one water-soluble or -dispersible binder,
    - (a22) at least one color pigment, and
    - (a23) water,  
and optionally, at least one of

- (a24) at least one organic solvent, wherein the organic solvent is optionally water- miscible,
- (a25) at least one crosslinking agent,
- (a26) at least one auxiliary, and
- (a27) at least one additive;

and

- (III) at least one aqueous, pigment-free mixing varnish module comprising

- (B) at least one pigment-free mixing varnish comprising
  - (b1) at least one water-soluble or -dispersible binder, and
  - (b2) water,

and optionally, at least one of

- (b3) at least one crosslinking agent,
- (b4) at least one auxiliary, and
- (b5) at least one additive;

and optionally,

- (IV) at least one pigment-free rheology module comprising

- (C) an aqueous medium comprising
  - (c1) at least one rheology control additive;

optionally, with the proviso that at least one of the additives (a16), (a27), and (b5) further comprise at least one rheology control additive (c1).

3. (Previously Presented) A process for preparing an aqueous coating material with precisely defined shade and optical effect comprising mixing modules differing in material composition and function and stored separately from one another, shortly before application of the coating material, wherein the modules comprise
  - (I) at least one module containing less than 5% by weight water that provides at least one of color and effect comprising
    - (A1) at least one base color containing less than 5% by weight water that imparts at least one of color and effect comprising

- (a11) at least one binder, wherein the binder is optionally water-soluble or water-dispersible,
- (a12) at least one pigment that imparts at least one of color and effect, and
- (a13) at least one organic solvent, wherein the organic solvent is optionally water-miscible,  
and optionally, at least one of
  - (a14) at least one crosslinking agent,
  - (a15) at least one auxiliary, and
  - (a16) at least one additive;
- (II) at least one aqueous color module comprising
  - (A2) at least one aqueous color-imparting base color comprising
    - (a21) at least one water-soluble or -dispersible binder,
    - (a22) at least one color pigment, and
    - (a23) water,  
and optionally, at least one of
      - (a24) at least one organic solvent, wherein the organic solvent is optionally water-miscible,
      - (a25) at least one crosslinking agent,
      - (a26) at least one auxiliary, and
      - (a27) at least one additive;

and

- (III) at least one pigment-free mixing varnish module comprising
  - (B) at least one aqueous, pigment-free mixing varnish comprising
    - (b1) at least one water-soluble or -dispersible binder, and
    - (b2) water,  
and optionally, at least one of
      - (b3) at least one crosslinking agent,
      - (b4) at least one auxiliary, and
      - (b5) at least one additive;

and optionally

(IV) at least one pigment-free rheology module comprising

(C) an aqueous medium comprising

(c1) at least one rheology control additive;

optionally, with the proviso that at least one of the additives (a16), (a27), and (b5) further comprise at least one rheology control additive (c1).

4. (Previously Presented) The aqueous coating material of claim 1, wherein the base color (A1) imparts one of i) effect or ii) color and effect.
5. (Previously Presented) The modular system of claim 2, wherein the modular system comprises one of
  1. at least one color module (I) containing less than 5% by weight water, at least one aqueous color module (II), and at least one aqueous, pigment-free mixing varnish module (III),
  2. at least one color and effect module (I) containing less than 5% by weight water, at least one aqueous color module (II), and at least one aqueous, pigment-free mixing varnish module (III), or
  3. at least one effect module (I) containing less than 5% by weight water, at least one aqueous color module (II), and at least one aqueous, pigment-free mixing varnish module (III).
6. (Previously Presented) The coating material of claim 1, wherein the additive (b5) comprises at least one rheology control additive.
7. (Previously Presented) The coating material of claim 1 further comprising the pigment-free, aqueous medium (C), and wherein the rheology control additive (c1) is provided only in the pigment-free, aqueous medium (C).

8. (Previously Presented) The modular system of claim 2, wherein the modular system further comprises the at least one pigment-free rheology module (IV).
9. (Previously Presented) The aqueous coating material of claim 1, wherein the binders (a11), (a21), and (b1) come from the same polymer class.
10. (Previously Presented) The aqueous coating material of claim 9, wherein the binders (a11), (a21), and (b1) are polyurethane resins.
11. (Previously Presented) The aqueous coating material of claim 1, wherein the binders (a21) and (b1), and optionally the binder (a11), comprise functional groups that can be converted into anions by at least one of neutralizing agents and anionic groups.
12. (Withdrawn) A method comprising applying the aqueous coating material of claim 1 to a substrate to provide one of an automotive OEM finish, an automotive refinish, and a plastic coating.
13. (Withdrawn) A method comprising applying the aqueous coating material of claim 1 to a substrate as a basecoat, and applying to the basecoat the aqueous coating material of claim 1 as a solid-color topcoat to provide one of an automotive OEM finish, an automotive refinish, and a plastic coating.
14. (Presently Amended) A coating prepared by a process comprising applying the aqueous coating material of claim 1 to a substrate to provide an applied coating material and curing the applied coating material to provide a coating.

15. (Previously Presented) The coating of claim 14, wherein the coating comprises a multicoat coating system, wherein the multicoat coating system is formed by a wet-on-wet technique, and wherein the multicoat coating system is at least one of a color coating system and an effect coating system.

16. (Canceled)

17. (Previously Presented) The modular system of claim 2, wherein the base color (A1) imparts one of i) effect or ii) color and effect.

18. (Previously Presented) The process of claim 3, wherein the base color (A1) imparts one of i) effect or ii) color and effect.

19. (Previously Presented) The process of claim 3, wherein the mixing modules comprise one of

1. at least one color module (I) containing less than 5% by weight water, at least one aqueous color module (II), and at least one aqueous, pigment-free mixing varnish module (III),
2. at least one color and effect module (I) containing less than 5% by weight water, at least one aqueous color module (II), and at least one aqueous, pigment-free mixing varnish module (III), and
3. at least one effect module (I) containing less than 5% by weight water, at least one color module (I) containing less than 5% by weight water, at least one aqueous color module (II), and at least one aqueous, pigment-free mixing varnish module (III).

20. (Previously Presented) The modular system of claim 2, wherein the additive (b5) comprises at least one rheology control additive.

21. (Previously Presented) The process of claim 3, wherein the additive (b5) comprises at least one rheology control additive.
22. (Previously Presented) The process of claim 3, wherein the aqueous coating material further comprises the at least one pigment-free rheology module (IV).
23. (Previously Presented) The modular system of claim 2, wherein the binders (a11), (a21), and (b1) come from the same polymer class.
24. (Previously Presented) The modular system of claim 23, wherein the binders (a11), (a21), and (b1) are polyurethane resins.
25. (Previously Presented) The process of claim 3, wherein the binders (a11), (a21), and (b1) come from the same polymer class.
26. (Previously Presented) The process of claim 25, wherein the binders (a11), (a21), and (b1) are polyurethane resins.
27. (Previously Presented) The modular system of claim 2, wherein the binders (a21) and (b1), and optionally the binder (a11), comprise functional groups that can be converted into anions by at least one of neutralizing agents and anionic groups.
28. (Previously Presented) The process of claim 3, wherein the binders (a21) and (b1), and optionally the binder (a11), comprise functional groups that can be converted into anions by at least one of neutralizing agents and anionic groups.

29. (Withdrawn) A method comprising applying the modular system of claim 2 to a substrate to provide one of an automotive OEM finish, an automotive refinish, and a plastic coating.
30. (Withdrawn) The process of claim 3 further comprising applying the aqueous coating material to a substrate to provide one of an automotive OEM finish, an automotive refinish, and a plastic coating.
31. (Withdrawn) A method comprising applying the modular system of claim 2 to a substrate as a basecoat, and applying to the basecoat the modular system of claim 2 as a solid-color topcoat to provide one of an automotive OEM finish, an automotive refinish, and a plastic coating.
32. (Withdrawn) The process of claim 3 further comprising applying the aqueous coating material to a substrate as a basecoat, and applying to the basecoat the aqueous coating material as a solid-color topcoat to provide one of an automotive OEM finish, an automotive refinish, and a plastic coating.
33. (Presently Amended) A coating comprising the result of applying the modular system of claim 2 to a substrate to provide an applied coating and curing the applied coating to provide a coating.
34. (Canceled) The coating produced by the process of claim 32.
35. (Canceled)
36. (Previously Presented) The coating of claim 33, wherein the coating comprises a multicoat coating system, wherein the multicoat coating system is formed by a wet-on-wet technique, and wherein the multicoat

coating system is at least one of a color coating system and an effect coating system.

37. (Canceled)
38. (Canceled)
39. (Previously Presented) The coating of claim 34, wherein the coating comprises a multicoat coating system, wherein the multicoat coating system is formed by a wet-on-wet technique, and wherein the multicoat coating system is at least one of a color coating system and an effect coating system.
40. (Canceled)
41. (Canceled)